

Amendments to the Specification:

Page 1, after the first paragraph, insert the following heading:

BACKGROUND OF THE INVENTION.

Page 4, after the first paragraph, insert the following heading:

SUMMARY OF THE INVENTION

Page 7, delete the fifth full paragraph and insert the following paragraph and heading:

Other objects, advantages and novel features of the present invention will become apparent from the following detailed description of the invention when considered in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

Page 8, after line 25 (after the sixteenth paragraph) insert the following heading:

DETAILED DESCRIPTION OF THE INVENTION

Please amend the paragraph bridging pages 17 and 18 as follows:

Accordingly, in the modification of Figures 17 and 18, a plate-like cap
[[32]] 36 is provided made from an electrically non-conductive material such as

glass, anodically bonded to the silicon outer support frame 17 to form both a mechanical protection and a hermetic seal. Where the underlying silicon is moveable such as the proof mass 3, mounting legs 4 and fingers 9, the cap may be pre-etched so as to be separate from these items so that they are free to move.

Please amend the first, second and third full paragraphs on page 18, as follows:

Wire bond pads ~~[[33]]~~ 37 are provided on the silicon, such as on the outer support frame 17 and are exposed for wires to be attached thereto by apertures ~~[[34]]~~ 38 there around provided through the cap ~~[[32,]]~~ 36, which apertures allow the cap ~~[[32]]~~ 36 to maintain the hermetic seal around them. The outer support frame 17 which is anodically bonded to the glass base 2 is also anodically bonded to the cap ~~[[32,]]~~ 36. This allows hermetic sealing of the silicon wafer. Wire bonds ~~[[35]]~~ 39 are thus attached to the bond pads ~~[[33]]~~ 37 by intermediate ball bonds ~~[[36]]~~ 40 conveniently made from gold.

The cap ~~[[32]]~~ 36 thus balances the stresses that may occur between a silicon/glass structure by providing a glass/silicon/glass structure which will not be subject to bending. By appropriately choosing the anodically bonding temperature it is possible to vary the tension in the silicon wafer if required. As it is known that stress is locked into a structure at the bonding temperature a choice of the temperature and bonding conditions will allow a particular strain to be locked in if required.

The presence of the cap ~~[[32,]]~~ 36, which is a hermetic seal, allows the gaseous medium within the accelerometer to be chosen and set at manufacture independent of any handling after manufacture. Typically atmospheric pressure dry nitrogen may be used to perform the requisite damping. Other gases such as neon may be used which has the benefit of a higher viscosity than nitrogen. This increases the damping that is known to stabilise the closed loop operation of the accelerometer. A higher pressure of gas can slightly increase the viscosity.

Page 18, after the last paragraph, insert the following paragraph:

The foregoing disclosure has been set forth merely to illustrate the invention and is not intended to be limiting. Since modifications of the disclosed embodiments incorporating the spirit and substance of the invention may occur to persons skilled in the art, the invention should be construed to include everything within the scope of the appended claims and equivalents thereof.